

COASTAL CONSERVANCY

Staff Recommendation

March 8, 2007

SALT RIVER ENHANCEMENT PLAN

File No. 07-015-01

Project Manager: Michael Bowen

RECOMMENDED ACTION: Authorization to disburse up to \$300,000 to the County of Humboldt to prepare a Salt River Enhancement Plan for the Salt River, a tributary to the Eel River Estuary in Humboldt County.

LOCATION: The Salt River flows from the Wildcat Mountains above the town of Ferndale in Humboldt County, across the lower Eel River delta, and enters the Eel River approximately one mile from the Pacific Ocean (Exhibit 1).

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS:

Exhibit 1: Project Location

Exhibit 2: Salt River Conceptual Enhancement Plan

Exhibit 3: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31111 and 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed three hundred thousand dollars (\$300,000) to the County of Humboldt (“County”) to develop a watershed enhancement plan for the Salt River watershed, subject to the condition that, prior to disbursement of any funds, the County shall submit for the review and approval of the Executive Officer of the Conservancy a work plan, schedule, budget, and the names of any contractors to be employed for preparation of the enhancement plan.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the purposes and criteria set forth in

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Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) regarding the enhancement of coastal resources

2. The project area has been identified in the Humboldt County local coast program as requiring public actions to resolve existing or potential resource protection problems
 3. The proposed project is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 25, 2001.”
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PROJECT SUMMARY:

The proposed authorization would enable the County of Humboldt to expand upon earlier Conservancy-funded feasibility studies and pursue the development of a full watershed enhancement plan for the Salt River. If approved, the County will utilize the current conceptual enhancement plan materials to complete a full enhancement plan, an environmental compliance document that meets CEQA standards, and all necessary pre-permitting materials, including a variety of studies and pre-permitting analyses. The resulting work product will be a permit-application-ready package characterizing a proposed and expansive habitat enhancement project on the Salt River.

The County’s goals for pursuing Salt River enhancement are three-fold: 1) to promote and participate in lower Salt River estuary and Eel River Delta enhancement opportunities afforded by the soon-to-be-acquired Riverside Ranch; 2) to develop a comprehensive upslope erosion control program designed to reduce erosion and increase the longevity of the lower river enhancement project, and; 3) in so doing to alleviate flooding patterns in the lower Salt River watershed, thereby helping to protect and promote the agricultural land use that has dominated the region for more than a century. In addition, this effort will diminish impacts to County infrastructure and to the City of Ferndale’s sewage treatment plant, which has been beset by frequent flooding and subsequent permit compliance problems. Development of the enhancement plan will also enable the County to leverage the results of work conducted under the Conservancy’s feasibility study, authorized in June 2003, and now nearing completion (Exhibit 2).

The Salt River watershed is 100 percent privately owned and is comprised mostly of small communities, pasturelands, and dairy farms. The larger Eel River delta supports over half of the agricultural land in Humboldt County’s coastal zone and is the heart of its dairy industry. Because of their location on the Salt River/Eel River delta flood plain, the lowlands around Ferndale are subject to continual flooding, causing property damage, impacting agricultural productivity, and taking the local wastewater treatment facility out of compliance with its permit terms. Annual overbank flooding affects from 600 to 1,000 acres of pastureland, at least one dairy waste system, and several sections of road, and continually threatens to overwhelm the Ferndale wastewater treatment facility.

Although the fourth largest estuary in California, the Salt River/Eel River delta is now estimated to be only 40 percent of its original size. At one time a 200-foot-wide, 15-foot-deep shipping channel at Port Kenyon, the Salt River today is no more than 20 feet wide and three feet deep, and is unnavigable. Estuarine habitat loss has devastated the native fish populations. Sedimentation has adversely affected anadromous fish by filling pools,

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raising average temperature, lowering dissolved oxygen, and smothering food organisms. The decrease in deep-water habitat prevents upstream migration of salmonids, and compelling any remaining fish to inhabit only the lower reaches, except during rare instances when migration upstream occurs. As a result, in a river that once supported large stocks of coho, chinook, steelhead, and coastal cutthroat trout, now only limited populations of cutthroat trout can be found, though portions of the estuary provide juvenile rearing habitat for other salmonid species.

Though sediment problems in the Salt River have been recognized for decades, large remediation costs, few enhancement site options, and lack of a coherent enhancement strategy have been impossible hurdles for the local community to overcome. Fortunately, the formation of the Salt River Advisory Group (SRAG), under the auspices of a feasibility grant from the Coastal Conservancy in 2003, have enabled the Humboldt County Resources Conservation District (RCD) to engage with the Conservancy, the Department of Fish and Game (DFG), the National Marine Fisheries Service (NMFS), the City of Ferndale, the Army Corps of Engineers (Corps), the County of Humboldt (County), and local landowners in crafting a project that restores lost habitat while addressing local flooding concerns.

An important development in the evolution of the overall project is the pending acquisition of Riverside Ranch, a dairy of nearly 450 acres located near the confluence of the Salt River and Eel River estuary. This property is now under contract for purchase, and title will pass to the California Department of Fish and Game. By purchasing this property, a more ambitious enhancement project on the Salt River has been rendered possible. Now, the project description will include Riverside Ranch, an area that will be periodically inundated under the proposed project description, thereby restoring hundreds of acres of tidal wetland, and by alleviating flooding in the upper reaches of the Salt by providing greater downstream capacity for water storage.

Another positive trend in the development of the proposed project and in the refinement of the conceptual project description has been the engagement of the Army Corps of Engineers, and the National Marine Fisheries Service. Limited to the utilization of modest congressional earmarks insufficient to launch Corps programs of the scale this project requires, the Corps has nonetheless dedicated their limited funding to tasks specifically called out as vital in the SRAG's Scope of Work. This vision and sense of partnership on the part of the Corps has enabled the SRAG to develop project elements compatible with both a state-led effort, and a broader Corps type undertaking, should a more expansive Corps role develop in the future. Similarly, NMFS has dedicated substantial staff time to designing a channel configuration and other project elements that will provide more efficient water conveyance and higher habitat value. This invaluable contribution by a key regulatory agency is sure to contribute towards an expeditious and well crafted Biological Opinion for the project, a component necessary for Endangered Species Act compliance.

Under the terms of the former grant, the RCD is negotiating and acquiring all the access allowances outside of the Riverside Ranch necessary for implementation of the Salt River Restoration Project. The County in turn is contributing engineering and procedural expertise in project development to the other SRAG partners. This authorization will allow the County to proceed with the development of the overall enhancement plan, which in turn

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will allow the SRAG partners to reach consensus on final project design, and utilize already awarded State Water Board funding for implementation.

Site Description: The Salt River/Eel River delta is the fourth-largest estuary in California. The Eel drains over 2.28 million acres and carries some 10 percent of California's run-off. It also carries one of the highest loads of suspended sediment of any river in the world. The estuary extends approximately seven miles from the Pacific Ocean, and the lower delta includes some 75 miles of fresh and saltwater sloughs which interlace an estimated 8,700 acres of wetlands. These wetlands include approximately 1,550 acres of mudflat and fresh and saltwater marshes, and 5,500 acres of farmed wetlands (transitional agricultural lands). Over 30 species of fish use the estuary as a feeding, spawning, or nursery area. Numerous species of anadromous fish currently or historically utilized the estuary, including the federally listed steelhead trout (*Oncorhynchus mykiss*), chinook (*Oncorhynchus tshawytscha*), and coho (*Oncorhynchus kisutch*). The lower Salt River subbasin is an important juvenile salmonid rearing area. Alternate rearing habitat is scarce because much of the Salt River is thermally lethal to salmonids during the summer, so the estuary provides habitat for extended rearing before ocean entry. The estuary also provides habitat for two federally and state listed endangered avian species, the brown pelican (*P. occidentalis*) and the peregrine falcon (*Falco peregrinus*).

Much smaller in size, the Salt River mimics the Eel's sediment load. The Salt River drains 36.4 square miles, and is 100 percent privately owned. Natural and human-induced factors have contributed to excessive sedimentation in the Salt River, which has lost channel capacity and tidal prism along its downstream reach near the confluence with the Eel River. In some areas the Salt River flows backwards. In other areas it ceases to flow in the natural sense at all. Natural factors contributing to sedimentation problems have included:

- Flooding and flood plain deposition of sedimentation associated with large-scale floods of the Eel River (including the record-breaking 1964 flood);
 - Natural erodibility of sedimentary formations in the steep upper reaches of the Salt River watershed;
 - Seismic activity, which triggers landslides in the upper watershed;
 - Geologic activity, shifting stream channels, and sea-level rise, which have resulted in long-term changes in the landscape; and
 - Rapid growth of vegetation (primarily invasive species) in the stream channel.
- Human-induced factors contributing to the sedimentation problems include:
- Historic land-use activities in the upper watershed;
 - Redirection of channels along property boundaries through the construction of levees;
 - Removal of mature riparian forest habitat, which historically stabilized streambanks and stream channels, and reduced direct sunlight and growth of vegetation within the stream channels; and
 - Reclamation activities and flood-control measures such as levees and dikes, tide gates, and dams, which reduce energy available for flushing by reducing the tidal prism.

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Project History: The Coastal Conservancy's first involvement at the Salt River occurred in the late 1980s through a grant to the Humboldt County RCD to produce an enhancement plan for the area. However, this plan was never implemented because it concluded that there were no cost-effective alternatives for a completely, self-maintaining system, and that recommended restoration with ongoing maintenance was infeasible. It is possible that the proposed restoration, further complicated by the need to perform the restoration entirely on private property, which would have overwhelmed the financial and staff resources of the local agencies at that time. It is also likely that community resistance to restoration of private property impeded progress. In any event, the project lost momentum. Though enhancement progress was impeded, flooding problems mounted. As flooding and habitat conditions on the Salt River worsened, and as the wastewater treatment plant fell into a greater degree of non-compliance, Humboldt County, the City of Ferndale, and the RCD worked together to gain community support for the project and collaborated with the Conservancy, DFG, NMFS, and the Coastal Commission on the present enhancement strategy. Furthermore, the ability to expand the project footprint to include Riverside Ranch has largely changed the dynamic of the project and rendered more enhancement options feasible. Development of this proposed fully scoped enhancement plan is critical to the success of the current conceptual enhancement strategy.

An affiliation of interested parties known as the Salt River Advisory Group (SRAG) has spent the last four years developing a conceptual enhancement plan for the entire Salt River watershed (Exhibit 2). This plan was funded by a 2003 Conservancy grant, and was so well conceived that it enabled the RCD to apply for, and receive commitments of more than \$6 million in implementation funds from the State Water Resources Control Board's Proposition 50 Integrated Water Resources Management Plans (IWRMP), and Consolidated Resources Management Plan (CRMP). Further, utilizing the conceptual proposal developed by the SRAG, the California Department of Fish and Game applied for, and received, \$1 million from the United States Fish and Wildlife Service for the purpose of acquiring Riverside Ranch, a key property within the project footprint.

The principal goal of the enhancement plan is to guide overall restoration efforts including erosion control efforts in the upper watershed, channel reconfiguration in the middle reaches, and restoration of the soon-to-be-acquired Riverside Ranch, located at the confluence of the Salt and Eel River estuary. As a result of this proposed project, hydraulic connectivity will be restored to the Salt, fish passage will return, and as many as 400 acres of historic tidal marsh will be restored to the Eel estuary.

PROJECT FINANCING:

Coastal Conservancy (cash)	\$300,000
U.S. Army Corps of Engineers (in kind)	\$400,000
National Marine Fisheries Service (in kind)	<u>\$100,000</u>
Total Project Cost	\$800,000

Funding for the proposed project is expected to come from the Conservancy's FY 2004/05 appropriation from the Safe Neighborhood, Clean Water, Clean Air, and Coastal

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Protection Bond Fund (Proposition 50). Proposition 50 authorizes the Conservancy's use of these funds for the purpose of protecting coastal watersheds through projects undertaken pursuant to the Conservancy's enabling legislation (Division 21 of the Public Resources Code) to acquire, restore or protect water and land resources (Water Code Section 79570).

These funds may be used by the Conservancy for "the purpose of protecting coastal watersheds, including, but not limited to, ... associated planning, permitting, and administrative costs" (*Id.*) In addition, watershed protection activities financed with Proposition 50 funds must be "consistent with the applicable adopted local watershed management plan and the applicable regional water quality control plan adopted by the regional water quality control board" (Water Code Section 79507). The proposed project is consistent with the Conservancy's enabling legislation as described below and with applicable local and regional watershed management plans as discussed in the project history.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project would be undertaken pursuant to Chapter 6 of the Conservancy's enabling legislation, Public Resource Code Sections 31251-31270.

Pursuant to §31251, the Conservancy may award grants to public agencies to enhance coastal resources. This project will facilitate the restoration of hydraulic connectivity between the upper and lower Salt River and restoration of hundreds of acres of salt marsh on the Riverside Ranch property. Planning activities under this grant will benefit a variety of aquatic resources that are partly within and partly outside the coastal zone (Pub. Res. Code § 31251.2).

Pursuant to §31252, the proposed project is consistent with the County of Humboldt's Local Coastal Program, which includes policies in favor of public action (in particular, the County, working with property owners and state and federal agencies) to resolve resource protection problems in the Eel River area, as described in the "Consistency with Local Coastal Program Policies" section, below.

Consistent with §31253, the amount of funding recommended for the proposed project is based on the total amount of funding available for coastal resource enhancement projects, the fiscal resources of the applicant and its project partners, and the urgency of the project relative to other eligible coastal resource enhancement projects.

Consistent with §31257, the Conservancy may provide up to \$300,000 for development with an enhancement plan.

CONSISTENCY WITH CONSERVANCY'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with Goal 6 Objective A of the Conservancy's Strategic Plan, the project will design plans for increasing resource enhancement, including stream and habitat corridors and promoting public recreation, particularly at the Riverside Ranch portion of the proposed project area.

Consistent with **Goal 6 Objective B** this project will assist the Conservancy "to complete approximately 55 plans or projects to improve water quality to benefit coastal re-

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sources....” The enhancement plan will assist with the implementation of the enhancement project. Consistent with this goal, the enhancement plan will contribute towards the development of a project that improves adjacent farmlands near Ferndale, by alleviating chronic flooding problems there. Consistent with this section, the enhancement project is designed to foster the long-term viability of coastal agriculture in Humboldt County not only by reducing flooding of agricultural lands, but also by working with farmers and ranchers throughout the watershed to reduce the impacts of their operations on wildlife habitat and water quality.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the “Consistency with Conservancy's Enabling Legislation” section above.
2. **Consistency with purposes of the funding source:** See the “Project Financing” section above.
3. **Support of the public:** The proposed project has strong support from Congressman Mike Thompson, the County of Humboldt, the Department of Fish and Game, the National Marine Fisheries Service, the Coastal Commission, and others (see Exhibit 3: Letters of Support).
4. **Location:** The Salt River is a coastal draining watershed flowing from the Wildcat Mountains above the town of Ferndale in Humboldt County, across the lower Eel River delta, and entering the Eel River estuary approximately one mile from the Pacific Ocean (Exhibit 1).
5. **Need:** The chronic problems of sedimentation, associated flooding, wastewater discharge, and resource degradation problems in the Salt River have been recognized for decades. Yet, the combination of a lack of funding and the lack of a clear and comprehensive strategy to address these issues has hampered progress in the region. Now that the SRAG partners have developed a clear strategy to move forward, and a clear sign of enhancement implementation funding has appeared, the need to fully develop the enhancement plan, environmental compliance document, and permit applications is pressing. The State of California has demonstrated the leadership and financial wherewithal to work with the local community in developing a comprehensive and long-term solution to the various challenges facing residents of the Salt River area, and the Conservancy cash contribution is necessary to carry the project forward.
6. **Greater-than-local interest:** The Eel River estuary is the fourth largest in California, and yet is only 40 percent of its original size. Recovering a substantial portion of the Eel estuary alone is of greater than local interest, but the opportunity to restore more than 400 acres of tidal marsh in the Salt River while addressing local flooding concerns is an historic opportunity not to be missed. The project proposes to provide enhancements to threatened and endangered species of federal and statewide concern.

Additional Criteria

7. **Urgency:** Although a conceptual enhancement plan is complete, and although implementation funding is secured, the grantee lacks a final enhancement plan, final designs and environmental compliance documentation, as well as permit application materials. Thus, without this grant the project as currently envisioned will come to a standstill.
8. **Resolution of more than one issue:** If the Salt River Restoration Project is successful, it will help resolve a long-standing conflict between flood control issues and the management of sensitive coastal resources. The project will also protect and eventually restore sensitive habitat and help preserve nearby coastal agriculture.
9. **Leverage:** The implementation of the proposed project has substantial funding support from the United States Fish and Wildlife Service, and the State Water Resources Control Board. In addition, the Army Corps of Engineers has dedicated earmarked funding to the development of studies necessary for completion of the enhancement plan. The in-kind contributions of NMFS and others have also been invaluable to the development of the project.
12. **Readiness:** The RCD continues to work on this project under the auspices of the Conservancy's 2003 grant, though those funds will soon be fully disbursed. The County, an entity with greater experience in environmental compliance and engineering work for projects of this scope, is prepared to collaborate with the RCD and other SRAG partners on this project immediately.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The County of Humboldt Local Coastal Program (LCP) Eel River Area outlines several policies that relate to the preservation and restoration of sensitive coastal habitat, and the Salt River in particular, including: Policy 3.28: "Minimize the risk to life and property in areas of high geologic, flood and fire hazard"; Policy 3.34: "The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy and conflicts shall be minimized between agricultural and urban land uses"; Policy 3.41: "Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values"; Policy 3.41 1.a.(2): "The County shall continue to pursue opportunities to restore or enhance, if possible, in-stream flows"; Policy 3.41 F.6.a: "... long-term protection of riparian vegetation ... should be provided. ... To achieve these objectives, the County should work with property owners and affected State and Federal agencies"; Policy 3.41 G.7.: "Natural drainage courses ... shall be retained and protected from development which would impede the natural drainage pattern or have a significant adverse effect on water quality or wildlife habitat."

COMPLIANCE WITH CEQA:

Preparation of the enhancement plan involves only data gathering, planning, and feasibility analyses for possible future actions and is thus statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to 14 California Code of Regulations §15262. The enhancement plan does not have a legally binding affect on future activities or authorizations which may be subject to further CEQA review.

Staff will file a Notice of Exemption upon approval.

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